AF

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application of:	Tasadduk Hussain
Serial No.:	10/675,622
Filing Date:	September 30, 2003
Confirmation No.:	6350
Title:	METHOD AND APPARATUS FOR BLOWING PLASTIC CONTAINERS
Attorney Docket:	17416-01
Group Art Unit:	1732
Examiner:	S. Staicovici

CERTIFICATE OF MAILING

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

On July 19, 2007

Diana Castillo
(Name of Person Signing Paper)

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(Signature of Person Signing Paper)

AMENDED APPEAL BRIEF

Please charge the additional appeal fee, together with any other charges or fees associated with this submission, to Account No. 15-0875 (Owens-Illinois).

Contents **Pages**

1. Real Party In Interest

This application is assigned to Owens-Illinois HealthCare Packaging Inc., which is wholly owned subsidiary of OI Plastic Products FTS Inc., which is a wholly owned subsidiary of Owens-Illinois Group, Inc., which is a wholly owned subsidiary of Owens-Illinois, Inc., who is the real party in interest in this appeal.

2. Related Appeals and Interferences

There are no related appeals or interferences.

3. Status of Claims

Claims 28-33 have been rejected and are the subject of this appeal.

Claims 1-8 and 27 have been canceled.

Claims 9-26 have been withdrawn.

No claims are allowed.

4. Status of Amendments After Final Rejection

No amendments after final rejection have been filed.

5. Summary of the Claimed Subject Matter

Independent Claim 29 is directed to an injection blow molding machine having a turret 10 with at least three planar faces 12-16 (specification page 3, line 22 to page 4, line 2). Each of the planar faces carries at least one hollow core rod 18 (page 4, lines 2-5). The turret 10 is rotatable in an indexing motion to present each

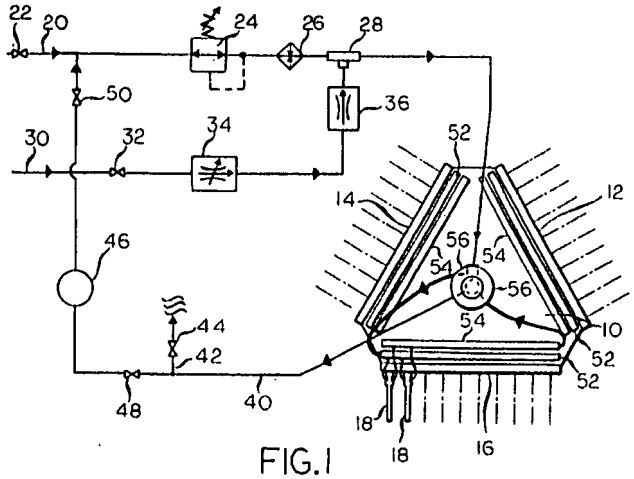


FIG.1

face 12-16 successively at a plurality of stations (page 4, lines 5-14). At one of the stations, a preform of an article is formed on the core rod 18 (page 4, lines 6-8). At a successive one of the stations, a blown article is formed from the preform on the core rod (page 4, lines 8-9). In the disclosure of the application, the blown article preferably is a plastic container (page 1, line 7).

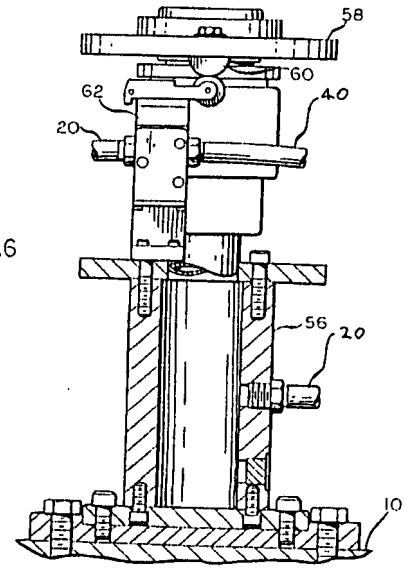


FIG.6

The apparatus of claim 29 further includes a source 20 of compressed air and means (pressure regulator 24 and/or heater 26 and/or cooler 28) for conditioning the compressed air from the source 20 (page 5, lines 3-14). There are means (rotary union 56, cooling air inlet manifold 52 and cooling air outlet manifold 54) for circulating conditioned compressed air from the conditioning means through the core rod at the preform injection station (page 6, lines 1-10). The means for circulating compressed air include means (outlet line 40 and either branched line 42 and valve 44 or valves 48,50 and compressor 46) for exhausting compressed air from the core rod (page 5, line 17 to page 6, line 10). There also are means for blocking circulation of compressed air from the conditioning means through the core rod by blocking the exhaust of spent condition air. In the preferred embodiment, this blocking means is illustrated in FIG. 6 as including a cam 60 suspended from a cam plate 58 for actuating a limit switch 62 and thereby blocking exhaust of air through of exhaust line 40 (FIG. 1) (page 6, lines 5-8).

Independent claim 28 contains all of the limitations of claim 29, and additionally recites at lines 16-19 means (compressor 46 in FIG. 1) for compressing air exhausted from the core

rod and returning such compressed air to the circulating and conditioning means (page 5, lines 20-23). Thus, independent claim 28 recites an injection blow molding machine having a turret 10 with at least three planar faces 12-16 (specification page 3, line 22 to page 4, line 2). Each of the planar faces carries at least one hollow core rod 18 (page 4, lines 2-5). The turret 10 is rotatable in an indexing motion to present each face 12-16 successively at a plurality of stations (page 4, lines 5-14). At one of the stations, a preform of an article is formed on the core rod 18 (page 4, lines 6-8). At a successive one of the stations, a blown article is formed from the preform on the core rod (page 4, lines 8-9). In the disclosure of the application, the blown article preferably is a plastic container (page 1, line 7).

The apparatus of claim 28 further includes a source 20 of compressed air and means (pressure regulator 24 and/or heater 26 and/or cooler 28) for conditioning the compressed air from the source 20 (page 5, lines 3-14). There are means (rotary union 56, cooling air inlet manifold 52 and cooling air outlet manifold 54) for circulating conditioned compressed air from the conditioning means through the core rod at the preform injection station (page 6, lines 1-10). The means for circulating compressed air include means (outlet line 40 and either branched line 42 and valve 44 or valves 48,50 and compressor 46) for exhausting compressed air from the core rod (page 5, line 17 to page 6, line 10). There also are means for blocking circulation of compressed air from the conditioning means through the core rod by blocking the exhaust of spent condition air. In the preferred embodiment, this blocking means is illustrated in FIG. 6 as including a cam 60 suspended from a cam plate 58 for actuating a limit switch 62 and thereby blocking exhaust of air through of exhaust line 40 (FIG. 1) (page 6, lines 5-8). Means (compressor 46 in FIG. 1) compresses air

exhaust from the core rod and returns the air to the recirculating and conditioning means (page 5, lines 20-23).

6. Grounds of Rejection to be Reviewed on Appeal

Independent claim 29 has been rejected under 35 USC 103(a) over Gatti 4,668,117 in view of Martell 4,955,804 and Ikeda 5,817,348, and under 35 USC 103(a) over Farrell 3,998,577 in view of Martell and Ikeda.

Independent claim 28 has been rejected under 35 USC 103(b) over Gatti 4,668,177 on view of Martell 4,955,804, Ikeda 5,817,348 and Gasmare ,3,065,501, and under 35 USC 103(b) over Farrell 3,998,577 in view of Martell, Ikeda and Gasmire.

Independent claims 28 and 29 will be separately argued in this appeal brief. For purposes of this appeal only, dependent claims 30-33 will be considered to stand or fall with parent independent claim 29.

7. Argument

Rejection of claim 29 under 35 USC 103 (b) over Gatti 4,668,117 in view of Martell 4,955,804 and Ikeda 5,817,348

Gatti discloses a turret-type injection blow molding machine in which coolant is fed from a manifold 32 to and from the core rod 15. The coolant can be either air or liquid (column 1, line 57). The disclosure of this reference is directed in particular to provision of bellows-type adapters 37,38 in the coolant flow circuit to accommodate motion of the core rod during blow molding. The disclosure of this reference is silent regarding control of coolant flow except to say that "coolant can be supplied as required" (column 3, lines 22-23).

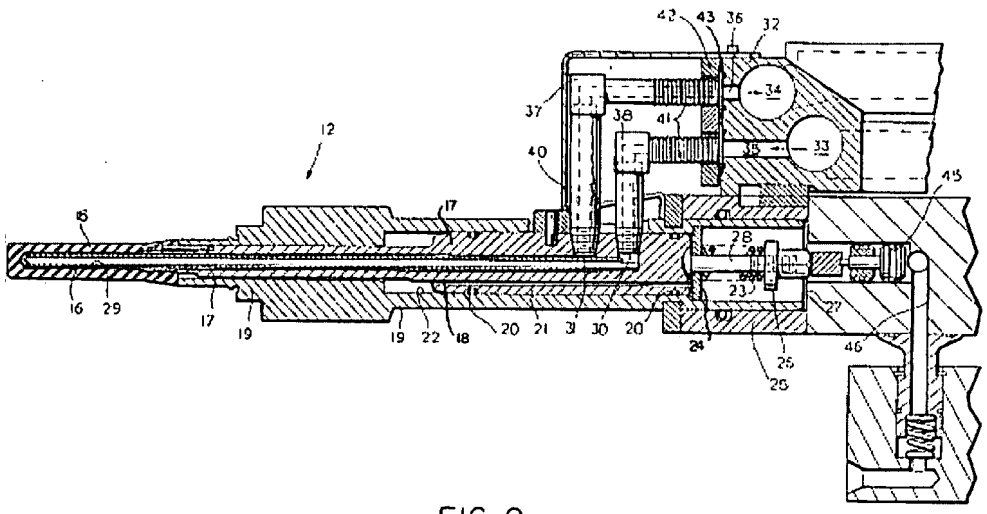
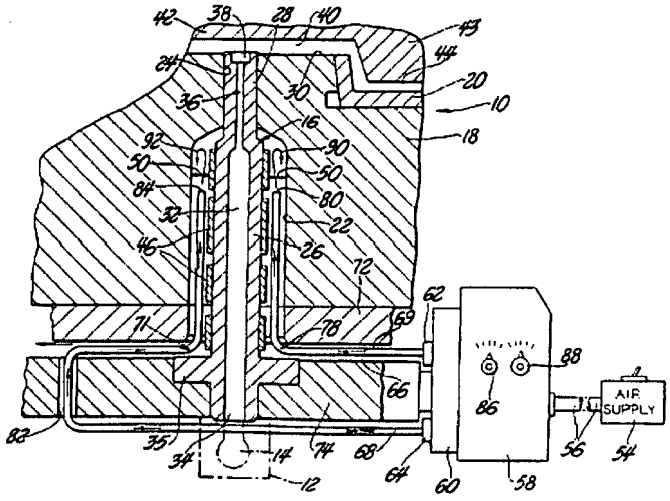


FIG. 2

Gatti thus discloses circulation of liquid or air coolant through a core rod "as required," but fails to disclose or suggest that the coolant is or should be circulated through the core rod at one station, such as the injection station, but blocked from circulation through the core rod at a successive one of the stations, such as the blow station. The Gatti reference in fact fails to disclose any means for blocking circulation of coolant by blocking exhaust of spent coolant from the core rod at the successive or blow station. The Martell and Ikeda secondary references do no supply this deficiency of the Gatti primary reference with respect to independent claim 29.

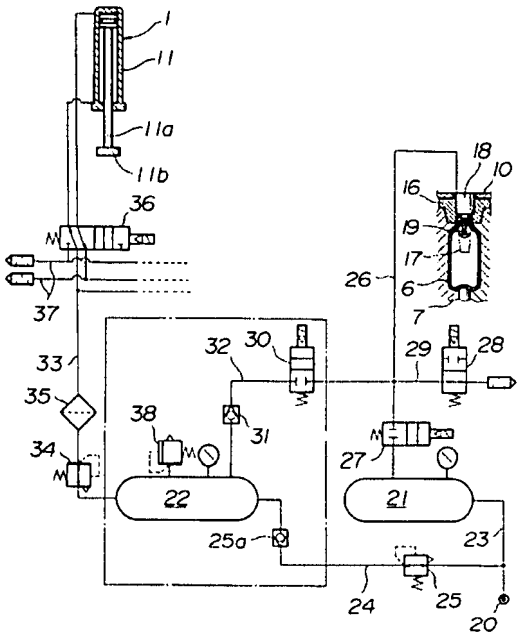
Martell 4,955,804 discloses a mold that includes a feeder tube 26 for supplying plastic from a hot runner system 12 to a mold space 44. Feeder tube 26 is externally surrounded by heater bands 46 to maintain the plastic at elevated temperature (column 2, lines 62-65). Heater bands 46 are surrounded by an



airspace 50 to retard transfer of such heat energy to the mold body 18 (column 2, line 65 to column 3, line 9). Compressed air is directed into space 50 to enhance this isolation (column 3, lines 10-19). This compressed air is exhausted to atmosphere. Thus, the compressed air in Martell is employed for a purpose completely different from and non-analogous to cooling of a core rod in an injection blow molding machine. The feeder tube 26 in Martell is not the same as or analogous to a core rod on which a preform is formed. The compressed air in Martell is not fed through the feeder tube and is not for cooling the feeder tube. In short, Martell is not relevant to coolant control in Gatti and/or Farrell.

Ikeda 5,817,348 discloses a blow mold system in which high pressure air from a blow tank 21 is selectively fed to a mold for blow molding a container. Exhaust air from the blow mold is selectively fed to a lower pressure working air tank 22 for use in driving the operating mechanisms of the mold. There is no plastic injection disclosed in Ikeda, and more importantly no use of air from either tank 21 or 22 for cooling a core rod in an injection blow molding machine.

Fig.1



Thus, there is no basis for combining Ikeda with Gotti and/or Farrell. Nor,

for that matter, is there any basis for combining Ikeda with Martell. It is clear from the foregoing discussion that the Martell and Ikeda references have nothing whatever to do with cooling a core rod in an injection blow molding machine of the type disclosed in the primary Gatti reference. Indeed, the secondary references do not even relate to cooling operating mechanisms in a molding machine. The compressed air in Martell is used for isolating feed tube heaters from a surrounding mold. The compressed air in Ikeda is used for blowing a molded article and operating mold mechanisms.

It is axiomatic that, to support the rejection of the present application claims, it is necessary that the prior art teach, suggest or provide incentive to modify the disclosures of the references in such a way as to meet the limitations of the rejected claims. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ 2d 1434 (Fed. Cir. 1988); *In re Geiger*, 815 F.2d 686 (Fed. Cir. 1987); *Ex parte Clapp*, 227 USPQ 972 (POBA 1985). This is particularly true, of course, where the elements of the references would be required to coact with each other in a manner different from the way they coact in the reference disclosures, or where the key or distinguishing element of the appealed claims is completely lacking in the references.

> [I]n order to meet the terms of the claims on appeal, the elements of the [prior art] device would have to be arranged in a manner different from that disclosed by [the art]. The elements of the reference would also be required to coact differently from the way they coact in the arrangement disclosed by the reference. The mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide motivation or reason for the worker in the art, without the benefit if applicant's specification, to make the necessary changes in the reference device.

Ex parte Chicago Rawhide Mfg. Co, 223 USPQ 351, 353 (POBA 1984). See also *Fromsom v. Advanced Offset Plate, Inc.*, 755 F.2d 1549, 225 USPQ 26 (CAFC 1985); *In re Sernaker*, 702 F.2d 989, 217 USPQ 1 (CAFC 1983) and *Ex parte Stauber*, 208 USPQ 945, 946 (POBA 1980).

Simply stated:

> It is wrong to use the [application claims] as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims [on appeal]. Monday morning quarterbacking is quite improper when resolving the question of non-obviousness in a court of law.

Orthopaedic Equipment Co., Inc. v. U.S., 702 F.2d 1005, 217 U.S.P.Q. 193, 199 (Fed. Cir. 1983). See also *In re Fritch*, 972 F.2d 1260 23 U.S.P.Q.2d 1780 (Fed. Cir. 1942) ("It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art." 23 U.S.P.Q.2d at 1784); *In re Pavlecka*, 138 U.S.P.Q. 152 (CCPA 1953); *Ex parte Garrett*, 132 USPQ 514 (POBA 1961).

Claim 29 clearly is patentable over Gatti compared to Martell and Ikeda.

Rejection of claim 29 under 35 USC 103(a) over Farrell 3,998,577 in view of Martell 4,955,804 and Ikeda 5,817,348

Farrell discloses a core rod for an injection blow molding machine (column 1, lines 4-5). Coolant such as water (column 3, line 11) is circulated from an inlet 14 through a spiral path (FIG. 2) around a tube 15 and then to an outlet 13. A hollow rod 25 is disposed within tube 15 for gating passage of blow air. Thus, both of the primary Gatti and Farrell references are completely silent regarding control of coolant flow.

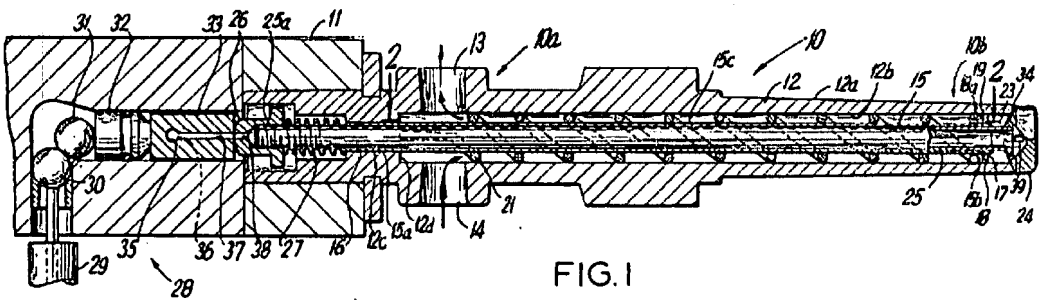


FIG. 1

The dissclosures of Martell and Ikeda have been discussed above at pages 7-8 of this Amended Appeal Brief.

The Farrell primary reference fails to disclose or suggest any means for circulating conditioned compressed air or other coolant through the core rod at one station, such as an injection station, but blocking circulation of coolant though the core rod at a subsequent station, such as a blow station, particularly by blocking exhaust of spent conditioned coolant from the core rod at the blow station. Farrell merely discloses circulation of coolant, such as water, through the core rod without describing how such circulation is controlled and at which stations the circulation is controlled. The secondary Martell and Ikeda references have nothing whatever to do with cooling a core rod in an injection blow molding machine of the type disclosed in Farrell. Indeed, the secondary Martell and Ikeda references do not even relate to cooling operating mechanisms in a molding machine. The compressed air in Martell is used for isolating feed tube heaters from a surrounding mold. The compressed air in Ikeda is used for blowing a molded article and operating the mold mechanisms. The secondary Martell and Ikeda references thus fail to supply the deficiencies of Farrell insofar as independent claim 29 is concerned.

Claim 29 clearly is patentable over Farrell combined with Martell, Ikeda and Gasmire.

Rejection of independent claim 28 under 35 USC 103(b) over Gatti 4,668,117 in view of Martell 4,955,804, Ikeda 5,817,348 and Gasmire 3,065,501

Independent claim 28 contains all of the limitations of independent claim 29 discussed above, and additionally recites means (compressor 46 in FIG. 1) for compressing the air exhausted from the core rod and returning the compressed air to the core rod.

The disclosures of Gatti, Martell and Ikeda have been discussed above at pages 6-8 of this Amended Appeal Brief.

Gasmire 3,065,501 discloses a blow mold system in which carbon dioxide is used to cool (FIG. 1), or to both blow and cool (FIG. 5), the article in a blow mold 10. The float 55 in FIG. 1 prevents feed of carbon dioxide vapor to mold 10, and the compressor 60 receives the separated carbon dioxide vapor from the float 55 and returns the carbon dioxide to the liquid storage vessel 57. The reclaim unit 75 in FIG. 5 receives carbon dioxide vapor from float 55 and mold 10, and returns liquid carbon dioxide to the storage vessel 57. Once again, Gasmire does not in any way involve cooling of a core rod in an injection blow molding machine.

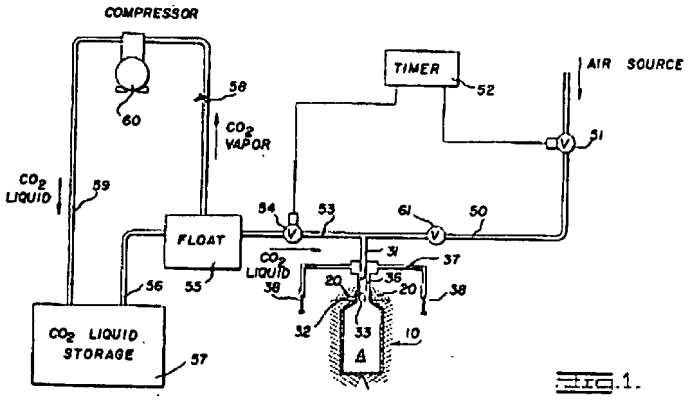


Fig. 1.

Gasmire thus merely discloses use of a compressor 60 or a reclaim unit 75 for returning carbon dioxide vapor from the float 55 and/or the mold 70 to a carbon dioxide liquid storage vessel 57. In other words, this reference discloses at most that the carbon dioxide vapor can be reclaimed and reused for blowing the molded article and/or cooling the molded article after blowing. The disclosure of Gasmire is completely unrelated to recirculating air coolant from and to a core rod in an injection blow molding machine.

In short, the Martell, Ikeda and Gasmire references have nothing whatever to do with cooling a core rod in an injection blow molding machine of the type disclosed in Gatti. Indeed, the secondary references do not even relate to cooling operating mechanisms in a molding machine. The compressed air in Martell is used for isolating feed tube heaters from a surrounding mold. The compressed air in Ikeda is used for blowing the molded article and operating the mold mechanisms. The liquid carbon dioxide in Gasmire is employed for cooling the blow molded article prior to opening the mold (and in one embodiment for blowing the article), and not for cooling any component of the mold itself. Independent claim 28 clearly is patentable over Gatti combined with Martell, Ikeda and Gasmire.

Claim 28 clearly is patentable over Gatti combined with Martell, Ikeda and Gasmire.

Rejection of independent claim 28 under 35 USC 103 (b) over Farrell 3,998,577 combined with Martell 4,955,804, Ikeda 5,817,348 and Gasmire 3,065,501

Independent claim 28 contains all of the limitations of claim 29, and additionally recites means (compressor 46 in FIG. 1) for compressing the cooling air exhausted from the core rod and returning the air to the core rod.

Farrell has been discussed in detail above at pages 10-11, and Martell and Ikeda have been discussed in detail above at pages 7-8 of this Amended Appeal Brief. Likewise, Gasmire has been discussed in detail above at page 12 of this Amended Appeal Brief. However, Gasmire merely discloses use of a compressor 60 or a reclaim unit 75 for returning carbon dioxide vapor from the float 55 and/or the mold 70 to a carbon dioxide liquid storage vessel 57. In other words, this reference discloses at most that the carbon dioxide vapor can be reclaimed and reused for blowing the molded article and/or cooling the mold article after blowing. The disclosure of Gasmire is completely unrelated to recirculating air coolant from and to a core rod of an injection blow molding machine.

It is clear from the foregoing discussion that the Martell, Ikeda and Gasmire references have nothing whatever to do with cooling a core rod in an injection blow molding machine of the type disclosed in Farrell. Indeed, the secondary references do not even relate to cooling operating mechanisms of a molding machine. The compressed air in Martell is used for isolating feed tube heaters from a surrounding mold. The compressed air in Ikeda is used for blowing the molded article and operating the mold mechanisms. The liquid carbon dioxide in Gasmire is employed for cooling the blow molded article prior to opening the mold (and in one embodiment for blowing the article), and not for cooling any component of the mold itself. Independent claim 28 clearly is patentable over Farrell combined with Martell, Ikeda and Gasmire.

Claim 28 clearly is patentable over Farrell combined with Martell, Ikeda and Gasmire.

It therefore is believed and respectfully submitted that the rejection of claims 28-33 should be reversed, and that these claims should be allowed.

Please charge any fees associated with this submission to Account No. 15-0875 (Owens-Illinois).

Respectfully submitted,

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8. Appendix of Appealed Claims

28.

An injection blow molding machine having a turret with at least three planar faces, each of the planar faces carrying at least one hollow core rod, the turret being rotatable by an indexing motion to present each face, successively, at a plurality of stations to form, at one of said stations, a preform of an article on said at least one core rod at said one of said stations, and then to form, at a successive one of said stations, a blown article from said preform on said at least one core rod, and apparatus for cooling said at least one core rod at said one of said stations, said apparatus comprising:

a source of compressed air;

means for conditioning compressed air from said source;

means for circulating conditioned compressed air from said means for conditioning compressed air through said at least one core rod at said one of said stations;

means for blocking circulation of compressed air from said means for conditioning compressed air through said at least one core rod at the successive one of said stations;

said means for circulating compressed air comprising means for exhausting compressed air from said at least one core rod at said one of said stations, and

means for compressing compressed air exhausted from said at least one core rod and returning said compressed air exhausted from said at least one core rod to said means for circulating compressed air for conditioning by said means for conditioning to return said compressed air exhausted from said at least one core rod to said at least one core rod,

wherein said means for blocking circulation of compressed air blocks the circulation

of compressed air by blocking the exhaust of spent conditioned air from the successive one of said stations.

29.

An injection blow molding machine having a turret with at least three planar faces, each of the planar faces carrying at least one hollow core rod, the turret being rotatable by an indexing motion to present each face, successively, at a plurality of stations to form, at one of said stations, a preform of an article on said at least one core rod at said one of said stations, and then to form, at a successive one of said stations, a blown article from said preform on said at least one core rod, and apparatus for cooling said at least one core rod at said one of said stations, said apparatus comprising:

a source of compressed air;

means for conditioning compressed air from said source;

means for circulating conditioned compressed air from said means for conditioning compressed air through said at least one core rod at said one of said stations; and

means for blocking circulation of compressed air from said means for conditioning compressed air through said at least one core rod at the successive one of said stations,

said means for circulating compressed air comprising means for exhausting compressed air from said at least one core rod at said one of said stations, and

wherein said means for blocking circulation of compressed air blocks the circulation of compressed air by blocking the exhaust of spent conditioned air from the successive one of said stations.

30.

Apparatus according to claim 29 wherein said means for conditioning comprises pressure regulating means for regulating pressure of said compressed air.

31.

Apparatus according to claim 29 wherein said means for conditioning comprises heater means for heating said compressed air.

32.

Apparatus according to claim 29 wherein said means for conditioning comprises cooler means for cooling said compressed air.

33.

Apparatus according to claim 32 wherein said cooler means comprises means for injecting a spray of water into said compressed air.

9. Evidence Appendix

None.

10. Related Proceedings Appendix

None.